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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,398	09/30/2003	Si-Hyun Song	8734.239.00 US	3749

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WASHINGTON, DC 20006

EXAMINER

ADAMS, GREGORY W

ART UNIT	PAPER NUMBER
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3652

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08/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/673,398

**Applicant(s)**

SONG, SI-HYUN

**Examiner**

Gregory W. Adams

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 2002-0061912.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 & 3-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babbs (Us 5,823,361) in view of Betsuyaku (US 6,006,919).

With respect to claims 1, 3, 7-13, 14-19 & 21-25 Babbs discloses a frame, support members 126 protruding from opposing sides, and two support bars 128 disposed at a distance from a frame 112 and connecting two support members 126 configured to distributed a load across a substrate. Babbs does not disclose rectangular supporting bars connecting two support members. Betsuyaku discloses a liquid crystal display panel cassette including rectangular supporting bars (FIG. 4: 3) that per international agreement improves "durability, sealing performance, good anti-staining performance, unmanned use, automation, ease of cleaning, etc." C1/L28. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Babbs to include rectangular supporting bars as per the teachings of Betsuyaku, to improve LCD cassette performance.

With respect to claims 4-6 & 20, Babbs discloses a frame, support members 126 protruding from opposing sides, and two support bars 128 disposed at a distance from a frame 112 and connecting two support members 126 configured to distributed a load

across a substrate, and does not explicitly disclose supporting liquid crystal display panels including thin film arrays and color filters but Babbs discloses supporting large glass substrates by using support members connected by support bars to minimize sag. C1. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Babbs' cassette to store liquid crystal display panels comprising thin transistor arrays and color filters as Babbs discloses the apparatus which could function to support large objects. Babbs does not disclose rectangular supporting bars connecting two support members. Betsuyaku discloses a liquid crystal display panel cassette including rectangular supporting bars (FIG. 4: 3) that per international agreement improves "durability, sealing performance, good anti-staining performance, unmanned use, automation, ease of cleaning, etc." C1/L28. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Babbs to include rectangular supporting bars as per the teachings of Betsuyaku, to improve LCD cassette performance.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Babbs (Us 5,823,361) in view Stadler et al. (US 5,236,548) (previously cited).

Babbs discloses a frame, support members 126 protruding from opposing sides, and two support bars 125 connecting two support members 126. Babbs does not disclose acetal resin. Referring to FIGS. 1-2 Stadler et al. disclose support bars 8 of acetal resin which is resistant to cleaning agents and etchants and that do not contaminate substrate. Col. 5, Ins. 39-46. Therefore, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to modify Babbs' supports to include acetal resin, as per the teachings of Stadler et al., such that supports resist cleaning agents and etchants and will not contaminate substrates.

***Response to Arguments***

Applicant's arguments filed June 12, 2007 have been fully considered but they are not persuasive.

With respect to substrates having a plurality of panel regions of liquid crystal display Applicant is respectfully reminded that the material or article worked upon by the apparatus does not limit apparatus claims. See MPEP 2115. In this case the structure as recited in the claims which supports Applicants object is disclosed in the cited prior art. Thus, the cassette device of the cited prior would support a substrate having a plurality of panel regions of liquid crystal display.

As noted above Babbs' supporting bars 128 are spaced a distance through supports 126 which extend perpendicularly from the frame 112 as shown in FIG. 2.

Applicant argues that one would not combine Babbs supports with Betsuyaku because Betsuyaku's supports are structurally different. While this might be a disadvantage to the combination it does not rise to the level of barring combination. One examining the relevant art would apply the shape as taught by Betsuyaku to Babbs supports to present a flat surface where more surface support is desired as in the case of handling large substrates. Betsuyaku teaches a flat surface for the purpose of modifying rounded surfaces as those disclosed in Babbs which in the process of "accommodating, storing, preserving, conveying and shipping precision substrates such

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as semiconductor wafers, lead frames, mask glass substrates, etc.” which serves the “development of semiconductor chips into large-sized configurations and increase in productivity therefore”. C1/L9-34. Thus, the combination is proper and made final.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Saul Rodriguez can be reached on (571) 272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GWA *GWA*

  
SAUL RODRIGUEZ  
SUPERVISORY PATENT EXAMINER